



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/081,194 | 02/25/2002 | Jaroslav Belonoznik | 022500-021 | 2760 |

7590

05/17/2005

George A. Hovanec, Jr.
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

CERULLO, JEREMY S

ART UNIT

PAPER NUMBER

2112

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,194

Applicant(s)

BELONONNIK, JAROSLAV

Examiner

Jeremy S. Cerullo

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-8 are pending in this action.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Czech Republic on February 26, 2001. It is noted, however, that applicant has not filed a certified copy of the PV 2001-720 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. In Claim 3, it is unclear whether "...connected by a local bus to the processor..." means the PCI adapter is connected to the processor via a local bus or the semiconductor disc is connected to the processor via a local bus.
6. Claims 4-8 are rejected based upon their dependence on Claim 3.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick, et al. (U.S. Patent No. 5,692,211), in view of Tuma, et al. (U.S. Patent No. 6,374,389).

9. As for Claims 1 and 2, Gulick teaches a PCI to SCSI adapter, which is equivalent to a control unit with a PCI bus interface and SCSI bus interface and with program equipment for connecting to a hard disk of a computing system (Figure 1). However, Gulick does not teach an electronic semiconductor disc. Tuma teaches a solid-state disk emulator (Column 4, Lines 29-34), which in the art is equivalent to an electronic semiconductor disc. Tuma also teaches that his solid-state disk emulator (electronic semiconductor disc) includes a processor and semiconductor memory (Column 6, Lines 8-28). Tuma also suggests the use of his solid-state disk emulator as a replacement for a hard disk (Column 4, Lines 29-34). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute an electronic semiconductor disc taught by Tuma for the hard disk in the use of a control unit with PCI and SCSI bus interfaces as taught by Gulick.

10. As for Claim 3, Gulick teaches a computing system (Figure 1) with a hard disk (Figure 1, Item 122), and a processor (Figure 1, Item 102) wherein the processor is connected to the PCI-SCSI adapter (Figure 1, Item 126), which is equivalent to the PCI adapter that includes a unit of a programmable SCSI control unit for communicating with an external computing system, via the PCI bus (Figure 1, Item 120). Gulick also teaches that the hard disk and the adapter are connected to the processor over the local bus (Figure 1, Item 104). The term "connected by" is interpreted as meaning the identified bus is used as either part of or the entire connection between the identified components. However, Gulick does not teach an electronic semiconductor disc. Tuma teaches a solid-state disk emulator (Column 4, Lines 29-34), which in the art is equivalent to an electronic semiconductor disc. Tuma also teaches that his solid-state disk emulator (electronic semiconductor disc) includes a processor and semiconductor memory (Column 6, Lines 8-28). Tuma also suggests the use of his solid-state disk emulator as a replacement for a hard disk (Column 4, Lines 29-34). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute an electronic semiconductor disc taught by Tuma for the hard disk in the computing system as taught by Gulick.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick and Tuma as applied to claims 1-3 above, and further in view of Stephens, Jr. (U.S. Patent No. 5,386,385). Tuma teaches the use of DRAM in the disk emulator (Column 6, Lines 8-17), but does not teach the use of SDRAM. Stephens, teaches the use of SDRAM (Synchronous Dynamic Random Access Memory) in place of DRAM (Dynamic

Random Access Memory), as well as the motivation for doing so (Column 1, Lines 62-66). SDRAM has a faster access rate than asynchronous DRAM. Therefore, one of ordinary skill in the art at the time of the invention would have been motivated to, as taught by Stephens, use SDRAM in place of the DRAM in the system taught by Gulick and Tuma.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick and Tuma as applied to claims 1-3 above, and further in view of Topham, et al. (United States Patent Application Publication No. US 2001/0018728). Gulick and Tuma teach an electronic semiconductor disc, but they do not teach that the system comprises a hard disk. Topham teaches the use of a magnetic disk drive (a hard drive) in conjunction with a solid-state storage device (Page 6, Paragraphs 0102-0103). Topham also suggests that using a hard drive in conjunction with a solid-state storage device (electronic semiconductor disc) in order to protect the stored information from being lost in the event of a failure of the solid-state device (Page 1, Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention would have used an electronic semiconductor disc taught by Gulick and Tuma in conjunction with a hard disk drive as taught by Topham.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick and Tuma as applied to claims 1-3 above, and further in view of Rang, et al. (U.S. Patent No. 6,003,017). Gulick and Tuma teach the PCI to SCSI adapter, but do not teach the added limitations of Claim 6. Rang teaches the internal configuration of a PCI to SCSI adapter that contains a ROM that is connected to the logic circuit of the adapter

(Figure 1B). One of ordinary skill in the art at the time of the invention would be motivated to use the adapter taught by Rang in the system taught by Gulick and Tuma in order to select appropriate drivers stored in the ROM for various SCSI hosts (Column 4, Lines 27-40).

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick, Tuma, and Rang as applied to claim 6 above, and further in view of Chan, et al. (U.S. Patent No. 5,388,267). Gulick, Tuma, and Rang teach all of the limitations of claim 7 except that the memory of the PCI adapter consists of EPROM, PEROM, EEPROM, or flash EPROM. Chan teaches the use of EPROM, EEPROM, and flash EPROM for BIOS (Column 3, Line 20 – Column 4, Line 26) in order to enable the modification or restoration of the code. One of ordinary skill in the art at the time of the invention would be motivated to use one of these programmable memories in the adapter of Gulick, Tuma, and Rang in order to make possible the modification of host drivers to correct for any errors in prior versions of the code.

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick, and Tuma as applied to claims 1-3 above, and further in view of Nguyen, et al. (U.S. Patent No. 5,185,876). Gulick and Tuma teach all of the limitations of Claim 8 except for the connection of the computer system by the SCSI bus to an external computing system. Nguyen teaches and suggests the connection of a computing system to an external computing system via a SCSI bus (Column 3, Lines 14-31). One of ordinary skill in the art at the time of the invention would have been motivated to follow Nguyen's

suggestion to connect the system taught by Gulick and Tuma to an external computing system via a SCSI bus.

Response to Arguments

16. Applicant's arguments filed February 24, 2005, have been fully considered but they are not persuasive. While the amendments to the claims did overcome the 35 USC § 112 rejections they did not overcome the 35 USC § 103 rejections. Claims 1 and 3 are still rejected as being unpatentable over Gulick in view of Tuma (see rejections above), and all of the dependents are rejected on the same grounds as the previous action.

17. Regarding the applicant's argument that none of the cited art teaches connecting a PCI or a SCSI bus to an electronic semiconductor disc, the examiner agrees. However Gulick does teach connecting a PCI and a SCSI bus to a hard disk, and Tuma teaches a solid state hard drive (equivalent to an electronic semiconductor disc) that he suggests can be used in the place of a hard disk. Therefore while neither Gulick nor Tuma teach connecting PCI and or SCSI buses to a ESD on their own, when taken in combination, with explicit suggestion by Tuma, they teach that limitation of the applicant's invention. Therefore, the applicant's argument is not persuasive.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

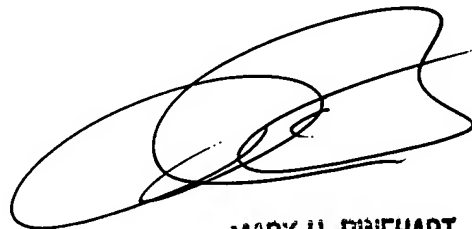
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 7:00-4:30; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (571) 272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JSC



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100